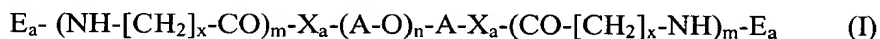


**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Previously Presented) A biaxially stretched and thermoset, tubular, seamless, single-layer or a biaxially stretched and thermoset, tubular, seamless, multiple-layer sausage casing having a residual shrinkage in the range of from 5 to 20% at 80°C, wherein the shrinkage is measured before stuffing, in which the layer or, in the case of multiple-layer casings, at least one of the layers comprises a block copolymer containing "hard" aliphatic polyamide blocks having a glass-transition temperature of from 20 to 80°C and "soft" aliphatic polyether blocks having a glass-transition temperature of from -100 to -20°C, which block copolymer corresponds to one of the formulae I to III



where

A is an alkanediyl radical of the formula

-CH<sub>2</sub>-CH<sub>2</sub>- (= ethane-1,2-diyl),

-CH<sub>2</sub>-CH(CH<sub>3</sub>)- (= propane-1,2-diyl) or

-(CH<sub>2</sub>)<sub>4</sub>- (= butane-1,4-diyl),

X<sub>a</sub> is -O- or -NH-,

E<sub>a</sub> is H, (C<sub>2</sub>-C<sub>8</sub>)alkanoyl, benzoyl or phenylacetyl,

CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)-CO-(C<sub>1</sub>-C<sub>4</sub>)alkyl,

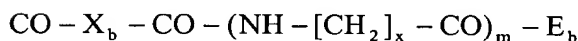
CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)-CO-C<sub>6</sub>H<sub>5</sub> or

CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)-CO-CH<sub>2</sub>-C<sub>6</sub>H<sub>5</sub>,

x is an integer from 5 to 11,

m is an integer from 30 to 200 and

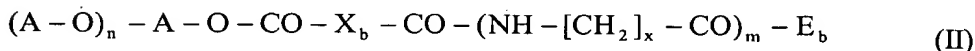
n is an integer from 4 to 60;



|

O

|



where

$X_b$  is an alkanediyl radical of the formula  $-[CH_2]_z-$ ,

where  $z$  is an integer from 4 to 10,

*meta*- or *para*-phenylene,

$-NH-(C_1-C_6)alkyl-NH-$ ,

$-NH-C_6H_3-(CH_3)-NH-$ ,

$>N-[CH_2]_{x-1}-CH_3$ ,  $-[CH_2]_z-CO-N([CH_2]_{x-1}-CH_3)-$  or

$-C_6H_4-CO-N([CH_2]_{x-1}-CH_3)-$ ,

where  $C_6H_4$  is *meta*- or *para*-phenylene,

$E_b$  is  $-OH$ ,  $-O-(C_1-C_7)alkyl$ ,  $-O-phen$

and

$A$ ,  $m$  and  $n$  have the meanings given above;

$-[X_a-(CO-[CH_2]_x-NH)_o-Y-X_a-(A-O)_p-A]-$  (III)

where

$Y$  is  $-CO-$ ,  $-CO-[CH_2]_z-CO-$  or  $-CO-C_6H_4-CO-$ ,

where  $C_6H_4$  is *meta*- or *para*-phenylene, or is

$-CO-N([CH_2]_{x-1}-CH_3)-CO-$ ,

$-CO-N([CH_2]_{x-1}-CH_3)-CO-[CH_2]_z-CO-N([CH_2]_{x-1}-CH_3)-CO-$  or

$-CO-N([CH_2]_{x-1}-CH_3)-CO-C_6H_4-CO-N([CH_2]_{x-1}-CH_3)-CO-$ ,

where  $C_6H_4$  has the meanings specified,

$o$  is an integer from 10 to 150 and

$p$  is an integer from 4 to 100 and

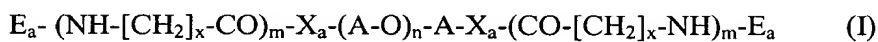
$X_a$ ,  $A$ ,  $x$  and  $z$  have the meanings given above.

2. (Cancelled)

3. (Previously Presented) The food casing as claimed in claim 1, wherein the polyamide blocks are polycaprolactam blocks and the polyether blocks are poly(ethylene glycol) or poly(butylene glycol) blocks.

4. (Previously Presented) The food casing as claimed in claim 1, wherein, in the block copolymers of the formulae I and II, m is from 40 to 100 and n is from 10 to 40 and, in the block copolymers of the formula III, o is from 10 to 60 and p is from 20 to 40.
5. (Previously Presented) The food casing as claimed in claim 1, wherein the layer comprises at least one aliphatic and/or partially aromatic (co-)polyamide, mixed with the remaining constituents.
6. (Original) The food casing as claimed in claim 5, wherein the (co-)polyamide is nylon 6, nylon 6/6,6, nylon 6/12, nylon 12 or nylon 6I/6T.
7. (Previously Presented) The food casing as claimed in claim 5, wherein the proportion of the (co-)polyamide is up to 85% by weight, based on the total weight of the layer.
8. (Previously Presented) The food casing as claimed in claim 1, wherein the layer comprises inorganic or organic pigments.
9. (Previously Presented) The food casing as claimed in claim 1, which consists of multiple layers and the further layers consist of polyamides or polyolefins.
10. (Previously Presented) The food casing as claimed in claim 1, which has been stretched by blow-molding and extruded through a heated ring die.
11. (Previously Presented) The food casing as claimed in claim 1, which has an area stretching ratio of from about 6 to 10.
12. (Withdrawn) A process for producing a biaxially stretched and thermoset, tubular, seamless, single-layer or a biaxially stretched and thermoset, tubular, seamless, multiple-layer food casing having a residual shrinkage in the range of from 5 to 20% at 80°C, in which the layer or, in the case of multiple-layer casings, at least one of the layers comprises a block copolymer containing "hard" aliphatic polyamide blocks having a glass-transition temperature of from 20 to 80°C and "soft" aliphatic polyether blocks having a glass-transition

temperature of from -100 to -20°C, which block copolymer corresponds to one of the formulae I to III



where

A is an alkanediyl radical of the formula

-CH<sub>2</sub>-CH<sub>2</sub>- (= ethane-1,2-diyl),

-CH<sub>2</sub>-CH(CH<sub>3</sub>)- (= propane-1,2-diyl) or

-(CH<sub>2</sub>)<sub>4</sub>- (= butane-1,4-diyl),

X<sub>a</sub> is -O- or -NH-,

E<sub>a</sub> is H, (C<sub>2</sub>-C<sub>8</sub>)alkanoyl, benzoyl or phenylacetyl,

CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)-CO-(C<sub>1</sub>-C<sub>4</sub>)alkyl,

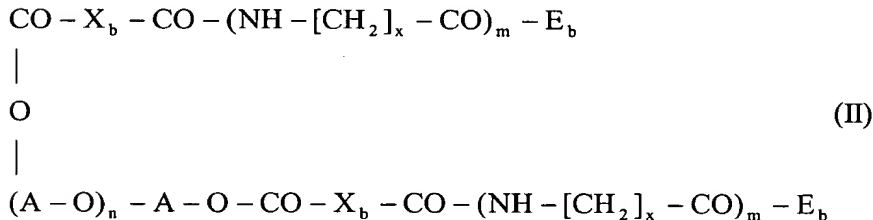
CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)-CO-C<sub>6</sub>H<sub>5</sub> or

CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)-CO-CH<sub>2</sub>-C<sub>6</sub>H<sub>5</sub>,

x is an integer from 5 to 11,

m is an integer from 30 to 200 and

n is an integer from 4 to 60;



where

X<sub>b</sub> is an alkanediyl radical of the formula -[CH<sub>2</sub>]<sub>z</sub>-,

where z is an integer from 4 to 10,

*meta*- or *para*-phenylene,

-NH-(C<sub>1</sub>-C<sub>6</sub>)alkyl-NH-,

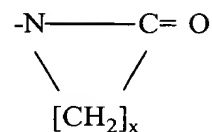
-NH-C<sub>6</sub>H<sub>3</sub>-(CH<sub>3</sub>)-NH-,

>N-[CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>, -[CH<sub>2</sub>]<sub>z</sub>-CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)- or

-C<sub>6</sub>H<sub>4</sub>-CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)-,

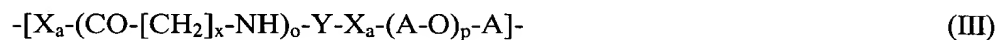
where C<sub>6</sub>H<sub>4</sub> is *meta*- or *para*-phenylene,

E<sub>b</sub> is -OH, -O-(C<sub>1</sub>-C<sub>7</sub>)alkyl, -O-phenyl or



and

A, m and n have the meanings given above;



where

Y is -CO-, -CO-[CH<sub>2</sub>]<sub>z</sub>-CO- or -CO-C<sub>6</sub>H<sub>4</sub>-CO-,

where C<sub>6</sub>H<sub>4</sub> is *meta*- or *para*-phenylene, or is

-CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)-CO-,

-CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)-CO-[CH<sub>2</sub>]<sub>z</sub>-CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)-CO- or

-CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)-CO-C<sub>6</sub>H<sub>4</sub>-CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)-CO-,

where C<sub>6</sub>H<sub>4</sub> has the meanings specified,

o is an integer from 10 to 150 and

p is an integer from 4 to 100 and

X<sub>a</sub>, A, x and z have the meanings given above, wherein said process

comprises:

preparing a homogeneous melt of a polymer blend containing the block

copolymer;

extruding the melt through a heated ring die to form a seamless tube;

stretching the extruded casing by blow molding to form a stretched

tube;

partially thermosetting the stretched tube to form the single or

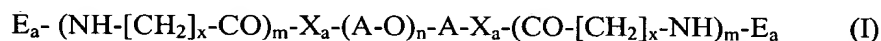
multilayer food casing.

13. (Withdrawn) A process according to claim 12, further comprising rapidly cooling the seamless tube after extrusion to obtain the polymers in an amorphous state, and heating the cooled tube to a blow molding temperature.

14. (Withdrawn) A process according to claim 12, wherein the step of extruding the melt through a heated ring die to obtain a seamless tube, further comprises coextruding

14. (Withdrawn) A process according to claim 12, wherein the step of extruding the melt through a heated ring die to obtain a seamless tube, further comprises coextruding the polymer blend and another polymer blend through a coextrusion die to obtain a multilayer seamless tube.

15. (Previously Presented) A biaxially stretched and thermoset, tubular, seamless, single-layer or a biaxially stretched and thermoset, tubular, seamless, multiple-layer sausage casing having a residual shrinkage in the range of from 5 to 20% at 80°C, wherein the shrinkage is measured before stuffing, in which the layer or, in the case of multiple-layer casings, at least one of the layers comprises a block copolymer containing "hard" aliphatic polyamide blocks having a glass-transition temperature of from 20 to 80°C and "soft" aliphatic polyether blocks having a glass-transition temperature of from -100 to -20°C, which block copolymer corresponds to one of the formulae I to III



where

A is an alkanediyl radical of the formula

-CH<sub>2</sub>-CH<sub>2</sub>- (= ethane-1,2-diyl),

-CH<sub>2</sub>-CH(CH<sub>3</sub>)- (= propane-1,2-diyl) or

-(CH<sub>2</sub>)<sub>4</sub>- (= butane-1,4-diyl),

X<sub>a</sub> is -O- or -NH-,

E<sub>a</sub> is H, (C<sub>2</sub>-C<sub>8</sub>)alkanoyl, benzoyl or phenylacetyl,

CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)-CO-(C<sub>1</sub>-C<sub>4</sub>)alkyl,

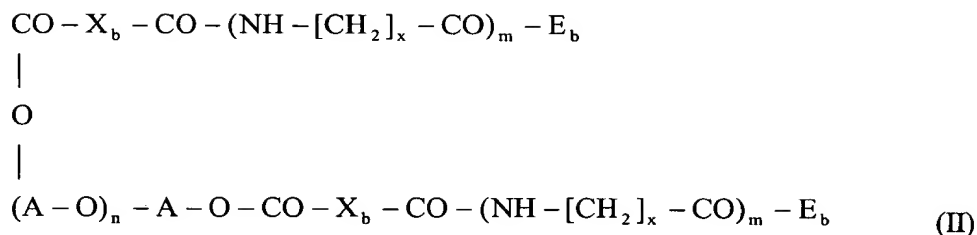
CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)-CO-C<sub>6</sub>H<sub>5</sub> or

CO-N([CH<sub>2</sub>]<sub>x-1</sub>-CH<sub>3</sub>)-CO-CH<sub>2</sub>-C<sub>6</sub>H<sub>5</sub>,

x is an integer from 5 to 11,

m is an integer from 30 to 200 and

n is an integer from 4 to 60;



where

$\text{X}_b$  is an alkanediyl radical of the formula  $-\text{[CH}_2\text{]}_z-$ ,

where  $z$  is an integer from 4 to 10,

*meta*- or *para*-phenylene,

$-\text{NH}-(\text{C}_1-\text{C}_6)\text{alkyl}-\text{NH}-$ ,

$-\text{NH}-\text{C}_6\text{H}_3-(\text{CH}_3)-\text{NH}-$ ,

$>\text{N}-[\text{CH}_2]_{x-1}-\text{CH}_3$ ,  $-\text{[CH}_2\text{]}_z-\text{CO}-\text{N}([\text{CH}_2]_{x-1}-\text{CH}_3)-$  or

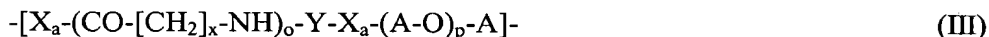
$-\text{C}_6\text{H}_4-\text{CO}-\text{N}([\text{CH}_2]_{x-1}-\text{CH}_3)-$ ,

where  $\text{C}_6\text{H}_4$  is *meta*- or *para*-phenylene,

$\text{E}_b$  is  $-\text{OH}$ ,  $-\text{O}-(\text{C}_1-\text{C}_7)\text{alkyl}$ ,  $-\text{O}-\text{phen}$

and

$\text{A}$ ,  $m$  and  $n$  have the meanings given above;



where

$\text{Y}$  is  $-\text{CO}-$ ,  $-\text{CO}-[\text{CH}_2]_z-\text{CO}-$  or  $-\text{CO}-\text{C}_6\text{H}_4-\text{CO}-$ ,

where  $\text{C}_6\text{H}_4$  is *meta*- or *para*-phenylene, or is

$-\text{CO}-\text{N}([\text{CH}_2]_{x-1}-\text{CH}_3)-\text{CO}-$ ,

$-\text{CO}-\text{N}([\text{CH}_2]_{x-1}-\text{CH}_3)-\text{CO}-[\text{CH}_2]_z-\text{CO}-\text{N}([\text{CH}_2]_{x-1}-\text{CH}_3)-\text{CO}-$  or

$-\text{CO}-\text{N}([\text{CH}_2]_{x-1}-\text{CH}_3)-\text{CO}-\text{C}_6\text{H}_4-\text{CO}-\text{N}([\text{CH}_2]_{x-1}-\text{CH}_3)-\text{CO}-$ ,

where  $\text{C}_6\text{H}_4$  has the meanings specified,

$o$  is an integer from 10 to 150 and

$p$  is an integer from 4 to 100 and

$\text{X}_a$ ,  $\text{A}$ ,  $x$  and  $z$  have the meanings given above, wherein the product is

produced by a process comprising:

preparing a homogeneous melt of a polymer blend containing the block copolymer;

extruding the melt through a heated ring die to form a seamless tube;  
rapidly cooling the seamless tube after extrusion to obtain the polymers  
in an amorphous state, and heating the cooled tube to a blow molding temperature;  
stretching the extruded casing by blow molding to form a stretched  
tube;  
partially thermosetting the stretched tube to form the single or  
multilayer food casing.

16. (Previously Presented) A casing according to claim 15, wherein the step of extruding the melt through a heated ring die to obtain a seamless tube, further comprises coextruding the polymer blend and another polymer blend through a coextrusion die to obtain a multilayer seamless tube.

17. (Previously Presented) A sausage casing according to claim 1, comprising a block copolymer according to formula III wherein  $X_a$  is O.

18. (Previously Presented) A sausage casing according to claim 15, comprising a block copolymer according to formula III wherein  $X_a$  is O.